

## ABSTRACT OF THE DISCLOSURE

A phase change memory includes a temperature sensor having a resistance variable with temperature with the same law as a phase-change storage element. The temperature sensor is formed by a resistor of chalcogenic material furnishing an electrical quantity that reproduces the relationship between the resistance of a phase change memory cell and temperature; the electrical quantity is processed so as to generate reference quantities as necessary for writing and reading the memory cells. The chalcogenic resistor has the same structure as a memory cell and is programmed with precision, preferably in the reset state.

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